

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A laser marking method comprising:

starting illumination of a laser beam from a laser oscillator onto a light-photosensitive heat-developing photosensitive material having a surface layer including an emulsion layer is formed on a surface of a base layer;

forming a cavity at an interior of the surface layer by energy of the laser beam;

forming a convex portion as a dot on a surface of the light-photosensitive heat-developing photosensitive material by completing illumination of the laser beam at a point in time when a portion illuminated by the laser beam on the surface layer is deformed into a convex shape by ~~a~~the cavity formed in an interior portion of the surface layer; and

forming a predetermined marking pattern by the dot or an arrangement of the dots.

2. (Original) The laser marking method of claim 1, further comprising completing illumination of the laser beam when a projecting height of the convex portion which forms the dot, with respect to a top surface of the surface layer, is 10 μm or more.

3. (*Original*) The laser marking method of claim 1, further comprising using an X-ray film as the light-photosensitive heat-developing photosensitive material.

4. (*Original*) The laser marking method of claim 1, further comprising controlling an oscillation output of the laser oscillator and an illumination time of the laser beam.

5. (*Original*) The laser marking method of claim 2, further comprising completing illumination of the laser beam when the projecting height of the convex portion which forms the dot, with respect to the top surface of the surface layer, is in a range of 10 μm or more and 50 μm or less.

6. (*Original*) The laser marking method of claim 3, wherein the step of forming the predetermined marking pattern includes, in a case in which the X-ray film is to be cut along a longitudinal direction and worked into one of a state of a narrow roll and a state of a narrow sheet, forming a cut line by cutting, and forming the marking pattern to have top-bottom symmetry at both sides of the cut line.

7. (*Original*) The laser marking method of claim 4, wherein controlling the oscillation output and the illumination time of the laser beam includes a step of using a laser oscillator whose oscillation output is 100 W and whose oscillation wavelength is in a 9 μm band, and setting the illumination time of the laser beam to be in a range of 25 μsec to 35 μsec .

8. (*Original*) The laser marking method of claim 5, further comprising making an outer diameter of the dot be around 100 μm .

9. (*Original*) The laser marking method of claim 6, further comprising making respective diameters of the dots substantially uniform, and holding a conveying speed of the X-ray film substantially constant.

10. (*Original*) The laser marking method of claim 8, further comprising making the outer diameter of the dot be a value greater than 100 μm .

11-20. (*Canceled*)

21. (*Currently amended*) A laser marking method comprising:
starting illumination of a laser beam from a laser oscillator whose oscillation wavelength is in a 9 μm band onto a light-photosensitive heat-

developing photosensitive material having a surface layer including an emulsion layer is formed on a surface of a base layer;

forming a cavity at an interior of the surface layer by energy of the laser beam;

forming a convex portion as a dot on a surface of the light-photosensitive heat-developing photosensitive material by completing illumination of the laser beam at a point in time when a portion illuminated by the laser beam on the surface layer is deformed into a convex shape by ~~a~~the cavity formed in an interior portion of the surface layer;

forming a predetermined marking pattern by the dot or an arrangement of the dots; and

controlling an oscillation output of the laser oscillator and an illumination time of the laser beam.

22. (*New*) The laser marking method of claim 1, wherein the step of forming the predetermined marking pattern includes deflecting the laser beam on to the light-photosensitive heat-developing photosensitive material in a direction transverse to a conveying direction of the light-photosensitive heat-developing photosensitive material.

23. *(New)* The laser marking method of claim 22, wherein a beam deflector is utilized to deflect the laser beams.

24. *(New)* The laser marking method of claim 23, wherein the beam deflector includes an acousto-optic device.

25. *(New)* The laser marking method of claim 1, further comprising directing the laser beam to a damper when the laser beam is not illuminated onto the light-photosensitive heat-developing photosensitive material.

26. *(New)* The laser marking method of claim 25, further comprising cooling the damper.

27. *(New)* The laser marking method of claim 21, wherein the step of forming the predetermined marking pattern includes deflecting the laser beam on to the light-photosensitive heat-developing photosensitive material in a direction transverse to a conveying direction of the light-photosensitive heat-developing photosensitive material.

28. *(New)* The laser marking method of claim 27, wherein a beam deflector is utilized to deflect the laser beams.

29. *(New)* The laser marking method of claim 28, wherein the beam deflector includes an acousto-optic device.

30. *(New)* The laser marking method of claim 21, further comprising directing the laser beam to a damper when the laser beam is not illuminated onto the light-photosensitive heat-developing photosensitive material.

31. *(New)* The laser marking method of claim 30, further comprising cooling the damper.